Certificate Number: 1449-02

MOTOROLA

ACCREDITED

CGISS EME Test Laboratory
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Fort Lauderdale, FL. 33322

S.A.R. EME Compliance Test Report
Part 1 of 3

Attention:	FCC
Date of Report:	September 23, 2003
Report Revision:	Rev. B
Manufacturer:	Motorola
Product Description:	Portable 438-470 MHz 1-4W with and without display and keypad
FCC ID:	**ABZ99FT4056**
Device Model:	AAH65RDC9AA1AN/ AAH65RDH9AA1AN

Test Period:	8/26/03-9/07/03
EME Tech:	Ed Church
EME Engineer:	Kim Uong Lead EME Engineer
Author:	Michael Sailsman Global EME Regulatory Affairs Liaison

Note: Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 2.0 of this report.

Signature on file — Ken Enger
Senior Resource Manager, Laboratory Director, CGISS EME Lab

9/24/03 — Date Approved

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REVISION HISTORY

Date	Revision	Comments
10/10/02	O	Initial Prototype Results
2/21/03	A	Disclosure of Pilot results
9/23/03	B	Disclosure of new results from derivative models

1.0 Introduction

This report details the utilization, test setup, test equipment, and updated test results of the Specific Absorption Rate (S.A.R.) measurements performed at the CGISS EME Test Lab for derivative model numbers AAH65RDC9AA1AN and AAH65RDH9AA1AN, FCC ID: ABZ99FT4056.

The applicable exposure environment is Occupational/Controlled.

2.0 Reference Standards and Guidelines

This product is designed to comply with the following national and international standards and guidelines.

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Terminal frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Terminal communications (Electromagnetic Radiation - Human Exposure) Standard 2003
- ANATEL, Brazil Regulatory Authority, Resolution 256 (April 11, 2001) "additional requirements for SMR, cellular and PCS product certification."

3.0 Description of Test Sample

The portable handheld transceiver models AAH65RDH9AA1AN (Keypad & Display) and AAH65RDC9AA1AN (no keypad, no display), FCC ID: ABZ99FT4056, operates using frequency modulation (FM) and incorporates traditional simplex two-way radio transmission protocol. The intended operating positions are “at the face” with the DUT front 1 to 2 inches from the mouth, and “at the body” by means of the offered body-worn accessories. Audio and PTT operation while the radio is at the abdomen is accomplished by means of optional remote accessories that connect to the radio. This device will be marketed to and used by employees solely for work-related operations, such as public safety agencies, e.g. police, fire and emergency medical. User training is the responsibility of these agencies, who can be expected to employ the usage instructions, safety information and operational cautions set forth in the user's manual, instructional sessions or other means. Motorola also makes available to its customers training classes on the proper use of two-way radios and wireless data devices.

FCC ID: ABZ99FT4056 is capable of operating in the 438-470 MHz band. The rated power is 1-4 watts with a maximum output capability of 4.6 watts as defined by the upper limit of the production line final test station.

FCC ID: ABZ99FT4056 is offered with the following options and accessories:

Antenna

NAE6483A	Standard antenna; Whip 403-520 MHz ¼ wave; -0.0 dBi
NAE6522A	Optional antenna Heliflex 438-470 MHz ¼ wave; -2.0 dBi
5886627Z01	Antenna Adaptor

Batteries

NNTN4497AR	Lithium Ion Battery 1800 mAh
NNTN4496AR	NiCd Battery 1100 mAh
NNTN4851A	NiMH Battery 1500mAh
NNTN4852A	NiMh – FM Battery 1300mAh
NNTN4970A	Slim Li Ion Battery 1500mAh

Body-worn Accessories

HLN6602A	Universal Chest Pack
RLN4570A	Break-A-Way Chest Pack
HLN8255B	3 inch Spring Action Belt Clip
RLN5640A	Hard Leather Carry Case with Belt Loop and D-Shaped Rings for limited DTMF
RLN5641A	Leather Carry Case with 2.5” Swivel Belt Loop for limited DTMF
RLN5642A	Hard Leather Carry Case with High Activity 3” Swivel Belt Loop for limited DTMF
RLN5498A	Hard Leather Carry Case with Belt Loop and D-Shaped Rings
RLN5496A	Hard Leather Carry Case with 2.5” Swivel Belt Loop
RLN5497A	Hard Leather Carry Case with High Activity 3” Swivel Belt Loop
NTN5243A	Shoulder Carry Strap, attaches to D-Shaped Rings on Carry Case
HLN9985B	Waterproof Bag

Audio attachments

HMN9030A	Remote Speaker Microphone
PMMN4008A	Remote Speaker Microphone (Mag One)
PMLN4442A	Earbud w/ Microphone & PTT combined w/ VOX (Mag One)
PMLN4443A	Flexible Ear Receiver w/ Microphone & PTT combined (Mag One)
PMLN4444A	Earset w/ Flexible Boom Microphone (Mag One)
PMLN4445A	Ultra Lightweight headset w/ Boom Microphone (Mag One)
PMLN4294C	Earbud w/ Microphone & PTT combined (Mag One)
PMLN4425A	Ultra-Lite Earset w/ Mic and Remote Ring PTT
BDN6646C	Standard 95dB Ear Microphone w/ PTT Interface Module

BDN6706B	Standard 95dB Ear Microphone w/ VOX and PTT Interface Module
0180358B38	Ring PTT Switch for Ear Mic System
0180300E83	Body PTT switch for Ear Mic System (works w/ BDN6646C, BDN6706B)
0180358B33	Medium Earholder for Ear Microphone System
HMN9727B	Earpiece without Volume Control - 1 Wire (Beige)
RLN4894A	Earpiece without Volume Control – 1 wire (Black)
HMN9752B	Earpiece with Volume Control - 1 Wire (Beige)
HMN9754D	Earpiece with Microphone & PTT Combined - 2 Wire (Beige)
RLN4895A	Earpiece with Microphone & PTT Combined – 2 Wire (Black)
HMN9036A	Earbud with Microphone & PTT Combined
HLN9132A	Earbud Single Wire Receive Only
RLN5198AP	2 Wire Surveillance Kit w/ Clear Comfortable Acoustic Tube Included (includes HMN9754D and NTN8371A)
BDN6720A	Flexible Ear Receiver
PMMN4001A	Ultra-Lite Earset with Mic and PTT
HMN9013A	Lightweight Headset
RMN4016A	Lightweight Headset with In-Line PTT
RLN5238A	Lightweight Headset with In-Line PTT, NFL style
HMN9021A	Medium Weight Over-The-Head Dual Muff Headset
HMN9022A	Medium Weight Behind-The-Head Dual Muff Headset
BDN6647F	Medium Weight Single Speaker Headset
BDN6648C	Heavy Duty, Dual Muff Headset with Noise Canceling Mic
RMN5015A	Heavy Duty, Dual Muff, Racing Headset (requires RKN4090A Headset Adapter Cable)
RMN4051B	2-way Hard Hat Mount, Black, Noise Reduction Rating = 22dB(Requires RKN4094A adapter cable)
RKN4094A	In-Line PTT adapter (Use w/ RMN4051B, RMN4052A, RMN4053A)
RMN4052A	Tactical Headband Style Headset, Gray, Noise Reduction Rating = 24dB (Requires RKN4094A Adapter Cable)
RMN4053A	Tactical Hard Hat Mount Headset, Gray, Noise Reduction Rating = 22dB (Requires RKN4094A Adapter Cable)
RMN4054B	Receive-Only Hard Hat Mount Headset with 3.5mm right angle plug
RMN4055A	Receive only Headband Style Headset w/ 3.5mm right angle plug
HLN9133A	VOX adapter kit (for use w/ PMLN4442A, PMLN4443A, PMLN4444A, PMLN4445A, BDN6706B, HMN9013A, HMN9021A, HMN9022A, BDN6647A, BDN6648C
RKN4090A	In-Line PTT Adapter (Use with RMN5015A)
RLN5411A	Ultra-Lite Breeze Behind the Head Headset

3.1 Test Signal

Test Signal mode:

Test Mode	X	Base Station		Simulator	

Transmission Mode:

CW	**X**
Native Transmission	
TDM:	
Other	

3.2 Test Output Power

Output power was measured before each test. The DASY3™ system's S.A.R. drift function was used to determine the power slump characteristic of the device. A characteristic power slump table based on 50 ohms measurements is provided in APPENDIX A for the batteries producing the highest S.A.R. results.

4.0 Description of Test Equipment

4.1 Descriptions of S.A.R. Measurement System

The laboratory utilizes a Dosimetric Assessment System (DASY3™) S.A.R. measurement system manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The test system consists of a Stäubli RX90L robot with an ET3DV6 E-Field probe. Please reference the SPEAG user manual and application notes for detailed probe, robot, and S.A.R. computational procedures.
The S.A.R. measurements were conducted with probe model/serial number ET3DV6/SN1383. The system performance check was conducted daily and within 24 hours prior to testing. DASY output files of the system performance test results and the probe/dipole calibration certificates are included in appendices C and D respectively. The table below summarizes the system performance check results normalized to 1W.

Probe Serial #	Tissue Type	Probe Cal Date	Dipole Kit / Serial #	System Perf. Result when normalized to 1W (mW/g)	Reference S.A.R @ 1W (mW/g)	Test Date(s)
1383	IEEE Head	2/26/03	SPEAG D450V2 MHz /1002	4.94 +/-0.03	4.70 +/- 10%	8/27/03-9/7/03 7 test days
1383	FCC Body	2/26/03	SPEAG D450V2 MHz /1002	4.79 +/- 0.18	4.52 +/- 10%	8/30/03-9/03 3 test days

Note: see APPENDIX C for an explanation of the reference S.A.R. targets stated above

The DASY3™ system is operated per the instructions in the DASY3™ Users Manual. The complete manual is available directly from SPEAG™. All measurement equipment used to assess EME S.A.R. compliance was calibrated according to 17025 A2LA guidelines.

4.2 Description of Phantom

4.2.1 Flat Phantom

A rectangular shaped box made of high-density polyethylene (HDPE) with a dielectric constant of 2.26 and a loss tangent of less than 0.00031. The phantom is mounted on a wooden supporting structure that has a loss tangent of < 0.05. The flat phantom used for this assessment has a 68.58 cm x 20.32 cm opening at its center to allow positioning the DUT to the phantom's surface. The flat phantom dimensions used for S.A.R. performance assessment at the body and face were: length=80cm, Width=30cm, Height=20cm, Surface thickness=0.2cm.

4.2.2 SAM Phantom

SAM Phantom assessment was not applicable for this filing.

4.3 Simulated Tissue Properties

4.3.1 Type of Simulated Tissue

The simulated tissue used is compliant to that specified in FCC Supplement C (Edition 01 - 01) to OET Bulletin 65 (Edition 97 - 01).

Simulated Tissue	Body Position
FCC Body	Torso
IEEE Head	Face

4.3.2 Simulated Tissue Composition

Tissue Ingredient (%) @ 450 MHz		
	Head	Body
Sugar	56	46.5
DGBE (Glycol)	-	-
De ionized -Water	39.1	50.53
Salt	3.8	1.87
HEC	1.0	1.0
Bact.	0.1	0.1

Characterization of Simulated tissue materials and ambient conditions:

Simulated tissue prepared for S.A.R. measurements is measured daily and within 24 hours prior to actual S.A.R. testing to verify that the tissue is within 5% of target parameters at the center of the transmit band. This measurement is done using the Agilent (HP) probe kit model 85070C and a HP8753D Network Analyzer.

Target tissue parameters

FCC Body				
Frequency (MHz)	**Di-electric Constant Target**	**Di-electric Constant Meas. (Range)**	**Conductivity Target S/m**	**Conductivity Meas. (Range) S/m**
450	56.70	54.9-55.9	0.94	0.90-0.92
454	56.70	54.9-55.8	0.94	0.90-0.92

IEEE Head				
Frequency (MHz)	**Di-electric Constant Target**	**Di-electric Constant Meas. (Range)**	**Conductivity Target S/m**	**Conductivity Meas. S/m**
450	43.5	45.0-45.4	0.87	0.88-0.90
454	43.5	45.0-45.4	0.87	0.88-0.91

4.4 Test conditions

The EME Laboratory ambient environment is well controlled resulting in very stable simulated tissue temperature and therefore stable dielectric properties. Simulated tissue temperature is measured prior to each scan to insure it is within +/ - 2^{o}C of the temperature at which the dielectric properties were determined. Additional precautions are routinely taken to ensure the stability of the simulated tissue such as covering the phantoms when scans are not actively in process in order to minimize evaporation. The lab environment is continuously monitored. The table below presents the range and average environmental conditions during the S.A.R. tests reported herein:

	Target	**Measured**
Ambient Temperature	20 - 25 ˚C	Range: 20.6-23.7˚C Avg. 22.7˚C
Relative Humidity	30 - 70 %	Range: 40.2-51.1% Avg. 43.3%
Tissue Temperature	NA	Range: 19.5-21.4˚C Avg. 20.28˚C

The EME Lab RF environment uses a Spectrum Analyzer to monitor for extraneous large signal RF contaminants that could possibly affect the test results. If such unwanted signals are discovered the S.A.R scans are repeated. However, the lab environment is sufficiently protected such that no S.A.R. impacting interference has been experienced to date.

5.0 Description of Test Procedure

All options and accessories listed in section 3.0 were considered in order to develop the S.A.R. test plan for this product. S.A.R. measurements were performed using a flat phantom to assess performance at the body and face. All assessments were done using the flat phantom containing either FCC body or IEEE head tissue where applicable, and with the DUT in CW mode.

Assessment of batteries w/ model AAH65RDC9AA1AN and antenna model NAE6483A:

To determine the battery that exhibited the highest S.A.R. results at the body, each of the offered batteries were tested using the standard antenna at the center of the DUT's transmit band. The measurements were performed with the offered belt clip. The standard remote speaker microphone (RSM) was also included in this assessment.

The DUT was assessed at the band edges of the DUT's transmit band, against the flat phantom, using the worst-case battery from above.

The DUT was assessed against the flat phantom, with the offered antenna adaptor, using the worst-case configuration from above.

Assessment of carry cases w/ model AAH65RDC9AA1AN and antenna model NAE6483A:

The DUT was assessed against the flat phantom, using the worst-case configuration from above, with each of the other offered carry case accessories.

Assessment of batteries w/ model AAH65RDC9AA1AN and antenna model NAE6522A:

The DUT was assessed at the center of the DUT's transmit band, with the offered belt clip against the flat phantom, using the standard RSM attached, along with each of the offered batteries.

The DUT was assessed at the band edges against the flat phantom, using the worst-case test configuration from the battery assessment above.

The DUT was assessed against the flat phantom, using the worst-case configuration from above, with the offered antenna adaptor.

Assessment of carry cases w/ model AAH65RDC9AA1AN and antenna model NAE6522A:

The DUT was assessed with the applicable carry case accessories against the phantom, using the worst-case test configuration from above.

Assessment of audio accessories w/ model AAH65RDC9AA1AN using the overall worst-case test configuration from above:

The DUT was assessed using the worst-case configuration from above, against the flat phantom, with each of the offered audio accessories.

Assessment at band edges w/ model AAH65RDC9AA1AN using worst-case test configuration from above:

The DUT was assessed across the DUT's transmit band using the worst-case test configuration above, with both the standard and optional antennas.

Assessment @ 2.5cm from abdomen w/ model AAH65RDC9AA1AN and antenna model NAE6522A:
The DUT was assessed with its back towards the phantom and antenna separated 2.5 cm from the flat phantom containing FCC body tissue, and with the front towards the phantom separated 2.5cm from the phantom, using the overall worst-case configuration from above.
Assessment @ 2.5 cm from face w/ model AAH65RDC9AA1AN and antenna model NAE6483A:
The DUT was assessed at the center of the DUT's transmit band with the DUT front separated 2.5cm from the flat phantom containing IEEE head tissue, using each of the offered batteries.
The DUT was assessed at the band edges of the DUT's transmission band, with the DUT separated 2.5cm from the flat phantom containing IEEE head tissue, using the worst-case battery from above.
The DUT was assessed using the worst-case test configuration from above, with the offered antenna adaptor.
Assessment @ 2.5 cm from face w/ model AAH65RDC9AA1AN and antenna model NAE6522A:
The DUT was assessed at the center of the DUT's transmit band, with the DUT front separated 2.5cm from the flat phantom containing IEEE head tissue, using each of the offered batteries and the optional antenna.
The DUT was assessed at the band edges of the DUT's transmit band, using the worst-case test configuration from above, with the DUT front separated 2.5cm from the flat phantom containing IEEE head tissue.
The DUT was assessed using the worst–case test configuration from above, with the offered antenna adaptor.
Assessment @ 2.5 cm from face w/ model AAH65RDC9AA1AN applicable audio accessories:
The DUT was assessed with the DUT separated 2.5cm from the flat phantom containing IEEE head tissue, using the worst-case configuration at the face, with each of the applicable audio accessories.
Assessment of DUT model AAH65RDH9AA1AN at the body:
The DUT was assessed using the test configurations that were within 1 system uncertainty from the highest calculated results observed during the body assessment of model AAH65RDC9AA1AN.
Assessments were performed with and without each of the offered audio accessories.
Assessment of DUT model AAH65RDH9AA1AN at the Face:
The DUT was assessed using the test configurations that were within 1 system uncertainty from the highest calculated results observed during the face assessment of model AAH65RDC9AA1AN.
Assessments were performed with the front of the DUT 2.5cm from the flat phantom filled with IEEE head tissue, with and without the offered antenna adaptor option, as well as with each of the applicable audio accessories.
Shortened Scan assessment:
The DUT was assessed at the body and face using "shortened" cube scans with the worst-case test configuration overall from each respective body location.

5.1 Device Test Positions

Reference Figure 1 for the device orientation and position which exhibited the highest S.A.R. performance.

5.1.1 Body

The DUT was positioned such that it was centered against the flat phantom with the applicable body-worn accessories and with 2.5cm separation distance from the phantom.

5.1.2 Head

Assessments at the head was not applicable for this filing

5.1.3 Face

The DUT was positioned at the center of the flat phantom with a 2.5cm separation distance from the microphone with and without the applicable audio accessories.

5.2 Test Position Photographs

Figure 1: Highest S.A.R. Test Position at the body
(DUT w/ carry case model RLN4570A and antenna model NAE6522A against the flat phantom)
All applicable audio accessories were tested in this position

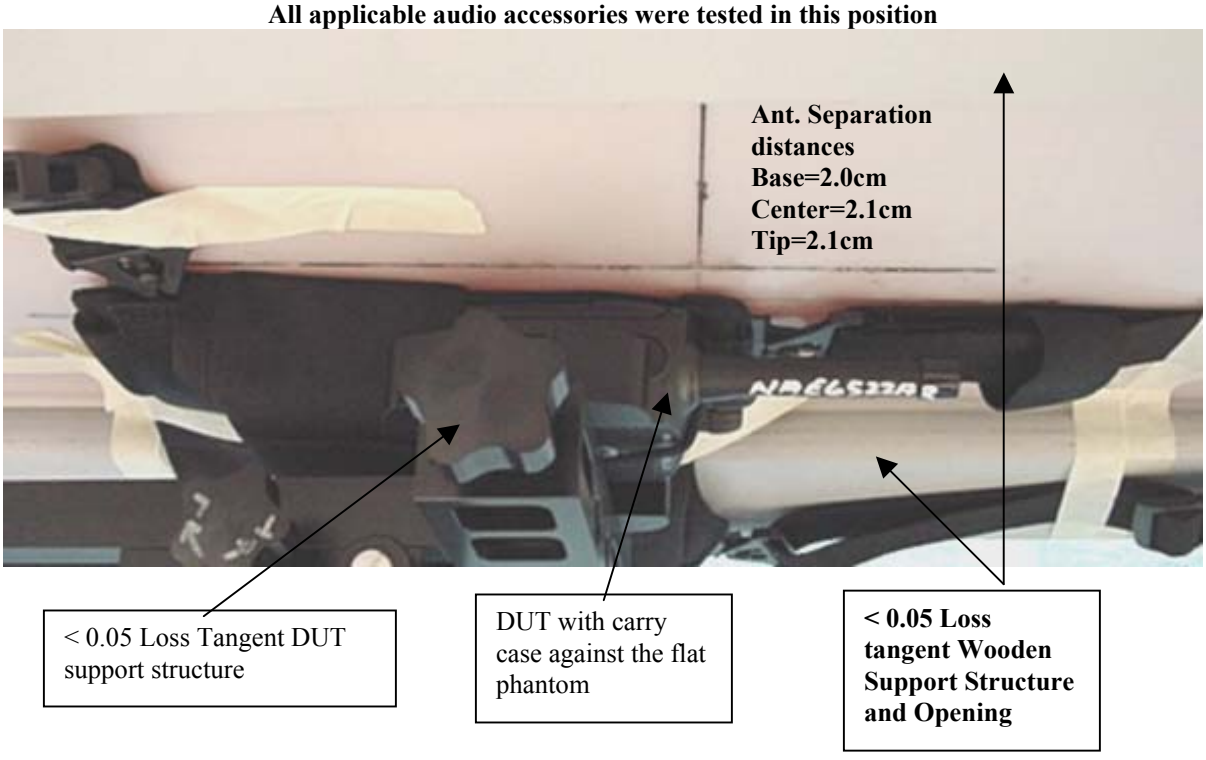

Figure 2. Assessment @ the body;
DUT w/ body worn accessory model HLN8255 and attached HMN9030A RSM
(Same position used w/ antenna adaptor attached)

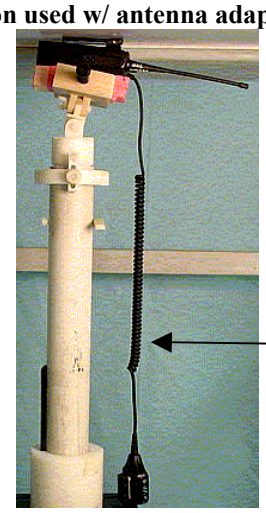

Figure 3: Assessment @ the body;
DUT w/ body worn accessory model RLN5640A, antenna model NAE6483A,
and attached HMN9030A RSM (same position used for antenna model NAE6522A)

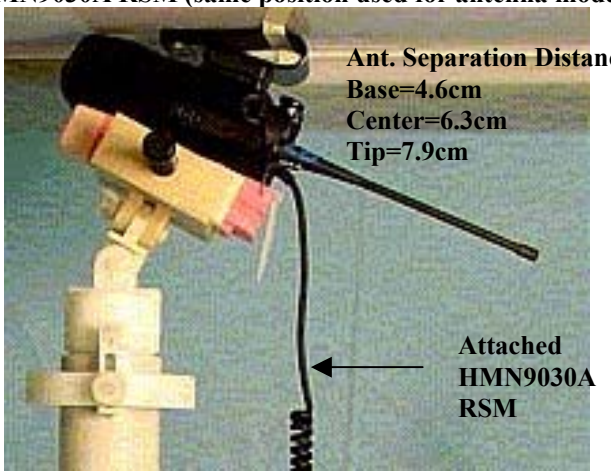

Figure 4: Assessment @ the body; DUT w/
Body worn accessory model RLN5641A, antenna model NAE6483A,
and attached HMN9030A RSM (same position used for antenna model NAE6522A)

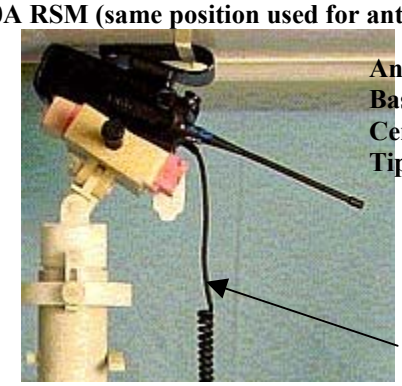

Figure 5: Assessment @ the body; DUT front w/ body worn accessory model RLN5642A, antenna model NAE6483A, and attached RSM model HMN9030A and shoulder strap model NTN5243A (Same position used w/o shoulder strap attached as well as with antenna model NAE6522A)

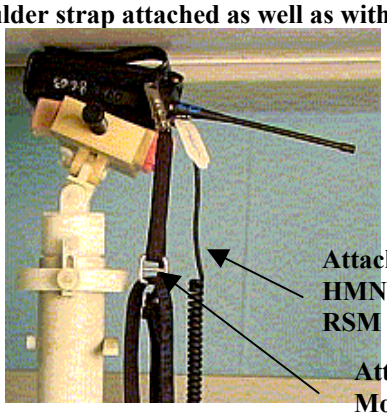

Figure 6: Assessment @ the body; DUT w/ body worn accessory model HLN6602A, antenna model NAE6483A, and attached RSM model HMN9030A. (Same position used for antenna model NAE6522A)

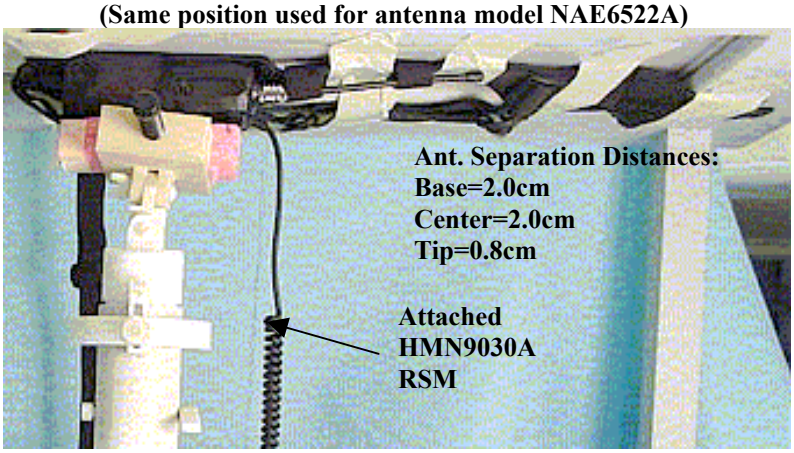

Figure 7: Assessment @ the body; DUT w/ back/antenna separated 2.5cm w/ attached applicable audio accessory model BDN6706B headset and PTT switch 0180358B38

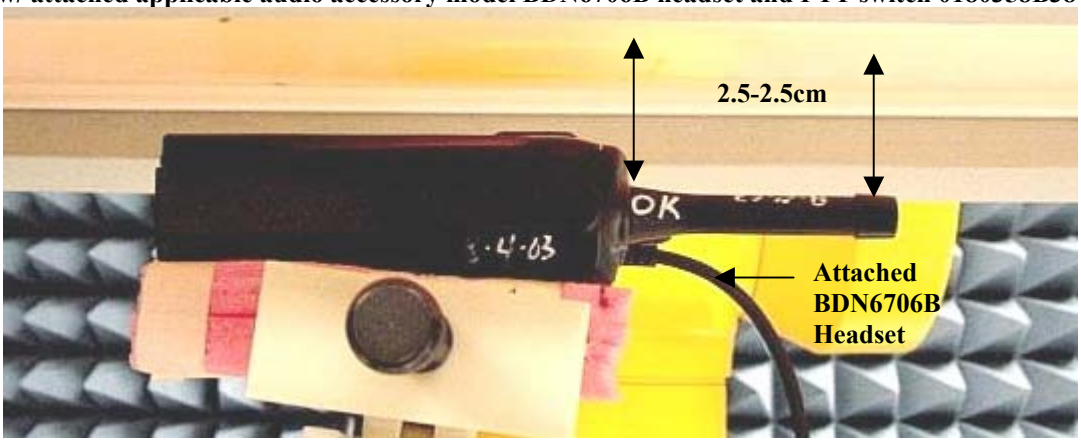

Figure 8: Assessment @ the Face; DUT front w/ 2.5cm separation
With attached Audio accessory model HLN9132A
(Same position used for all applicable audio accessory models,
antenna model NAE6483A, and antenna adaptor)

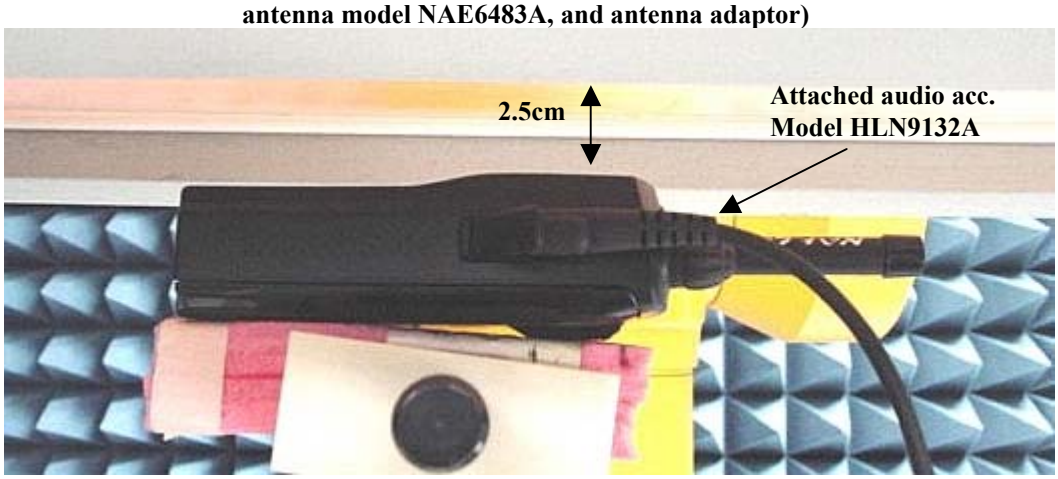

Figure 9: Robot Test setup (Abdomen)

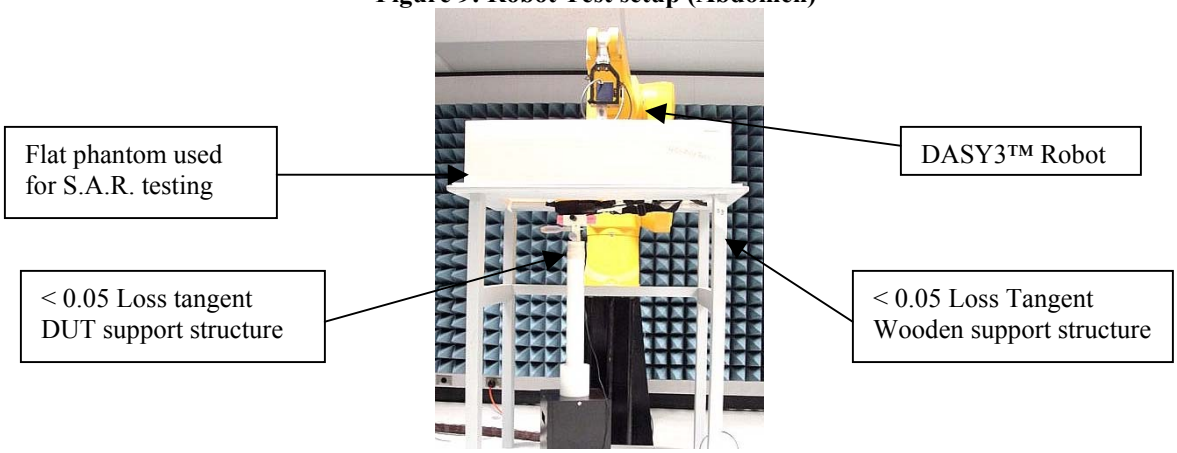

Figure 10: Robot Test Setup (Face)

5.3 Probe Scan Procedures

The E-field probe first scans in a coarse grid over a large area inside the phantom in order to locate the interpolated maximum S.A.R. distribution. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The subsequent scan can directly use this position as reference for the cube evaluations.

6.0 Measurement Uncertainty

Table 1: Uncertainty Budget for Device Under Test

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**Section of IEEE P1528**	**Tol. (± %)**	**Prob. Dist.**	**Divisor**	c_i **(1 g)**	c_i **(10 g)**	**1 g** u_i **(±%)**	**10 g** u_i **(±%)**	v_i
Measurement System									
Probe Calibration	E.2.1	4.8	N	1.00	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	5.8	R	1.73	1	1	3.3	3.3	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1.00	1	1	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	1.3	R	1.73	1	1	0.8	0.8	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.3	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	1.1	R	1.73	1	1	0.6	0.6	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	3.9	R	1.73	1	1	2.3	2.3	∞
Test sample Related									
Test Sample Positioning	E.4.2	3.6	N	1.00	1	1	3.6	3.6	29
Device Holder Uncertainty	E.4.1	2.8	N	1.00	1	1	2.8	2.8	8
Output Power Variation - SAR drift measurement	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	10.0	R	1.73	0.64	0.43	3.7	2.5	∞
Liquid Permittivity - deviation from target values	E.3.2	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity - measurement uncertainty	E.3.3	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Combined Standard Uncertainty			RSS				12	11	1363
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k*=2				23	22	

Uncertainty Budget for System Performance Check (dipole & flat phantom)

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**Sec.**	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i (1 g)**	**c_i (10 g)**	**1 g u_i (±%)**	**10 g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration	E.2.1	4.8	N	1.00	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	1	1	2.7	2.7	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0	0	0.0	0.0	∞
Boundary Effect	E.2.3	5.7	R	1.73	1	1	3.3	3.3	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1.00	1	1	1.0	1.0	∞
Response Time	E.2.7	0.0	R	1.73	1	1	0.0	0.0	∞
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.3	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	1.1	R	1.73	1	1	0.6	0.6	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	3.9	R	1.73	1	1	2.3	2.3	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	1.0	R	1.73	1	1	0.6	0.6	∞
Input Power and SAR Drift Measurement	8, 6.6.2	4.7	R	1.73	1	1	2.7	2.7	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	10.0	R	1.73	0.64	0.43	3.7	2.5	∞
Liquid Permittivity - deviation from target values	E.3.2	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity - measurement uncertainty	E.3.3	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Combined Standard Uncertainty			RSS				10	9.4	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k* =2				20	18	

Notes for Tables 1 and 2
a) Column headings *a-k* are given for reference.
b) Tol. - tolerance in influence quantity.
c) Prob. Dist. – Probability distribution
d) N, R - normal, rectangular probability distributions
e) Div. - divisor used to translate tolerance into normally distributed standard uncertainty
f) *ci* - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
g) *ui* – SAR uncertainty
h) *vi* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty.

7.0 S.A.R. Test Results

All S.A.R. results obtained by the tests described in Section 5.0 are listed in section 7.1 below. The bolded result indicates the highest observed S.A.R. performance. DASY3™ S.A.R. measurement scans are provided in APPENDIX B for the highest observed S.A.R.

APPENDIX A presents a shortened S.A.R. cube scan to assess the validity of the calculated results presented herein. Note that the results of the shortened cube scans presented in APPENDIX A demonstrate that the scaling methodology used to determine the calculated S.A.R. results presented herein are valid.

7.1 S.A.R. results

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of batteries w/ model AAH65RDC9AA1AN and antenna model NAE6483A:												
KU-R2-030827-05/PVQYY00K	454	NAE6483A	NNTN4497AR	Against phantom	HLN8255B	HMN9030A	4.60	-0.66	3.54	2.06	2.600	1.51
KU-R2-030827-08/PVQYY00K	454	NAE6483A	NNTN4496AR	Against phantom	HLN8255B	HMN9030A	4.62	-0.48	3.520	1.97	2.580	1.44
KU-R2-030828-02/PVQYY00K	454	NAE6483A	NNTN4851A	Against phantom	HLN8255B	HMN9030A	4.45	-0.49	3.460	2.00	2.520	1.46
KU-R2-030828-03/PVQYY00K	454	NAE6483A	NNTN4852A	Against phantom	HLN8255B	HMN9030A	4.25	-0.37	3.400	2.00	2.490	1.47
EC-R2-030828-04/PVQYY00K	454	NAE6483A	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.58	-0.48	3.700	2.08	2.690	1.51
EC-R2-030828-08/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.46	-0.53	5.080	**2.96**	3.690	2.15
EC-R2-030828-06/PVQYY00K	470	NAE6483A	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.61	-0.42	2.670	1.47	1.950	1.07
EC-R2-030828-07/PVQYY00K	438	NAE6483A w/ 5886627Z01 adaptor	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.47	-0.60	4.21	2.49	3.08	1.82

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of carry cases w/ model AAH65RDC9AA1AN and antenna model NAE6483A:												
EC-R2-030828-09/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	RLN5640A	HMN9030A	4.44	-0.74	2.150	1.32	1.620	1.00
EC-R2-030828-10/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	RLN5641A	HMN9030A	4.50	-0.67	1.310	0.78	0.988	0.59
EC-R2-030828-11/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	RLN5642A	HMN9030A	4.45	-0.69	1.340	0.81	1.010	0.61
EC-R2-030828-12/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	RLN5642A & NTN5243A	HMN9030A	4.48	-0.72	1.280	0.78	0.971	0.59
EC-R2-030828-13/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	HLN6602A	HMN9030A	4.48	-0.65	7.910	4.72	5.570	3.32
EC-R2-030828-14/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	RLN4570A	HMN9030A	4.54	-0.65	8.820	**5.19**	6.260	3.68

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of carry cases w/ model AAH65RDC9AA1AN and antenna model NAE6522A:												
EC-R2-030828-15/PVQYY00K	454	NAE6522A	NNTN4497AR	Against phantom	HLN8255B	HMN9030A	4.52	-0.70	3.380	2.02	2.470	1.48
EC-R2-030828-16/PVQYY00K	454	NAE6522A	NNTN4496AR	Against phantom	HLN8255B	HMN9030A	4.60	-0.68	3.590	2.10	2.590	1.51
EC-R2-030828-17/PVQYY00K	454	NAE6522A	NNTN4851A	Against phantom	HLN8255B	HMN9030A	4.62	-0.80	3.540	2.13	2.560	1.54
KU-R2-030829-02/PVQYY00K	454	NAE6522A	NNTN4852A	Against phantom	HLN8255B	HMN9030A	4.30	-0.98	3.570	2.39	2.570	1.72
KU-R2-030829-03/PVQYY00K	454	NAE6522A	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.58	-0.79	4.210	2.54	3.030	1.83
KU-R2-030829-04/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.46	-0.77	7.340	**4.52**	5.270	3.24
KU-R2-030829-05/PVQYY00K	470	NAE6522A	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.62	-0.61	2.110	1.21	1.520	0.87
EC-R2-030829-07/PVQYY00K	438	NAE6522A w/ 5886627Z01 adaptor	NNTN4970A	Against phantom	HLN8255B	HMN9030A	4.47	-0.81	6.150	3.81	4.440	2.75

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of carry cases w/ model AAH65RDC9AA1AN and antenna model NAE6522A:												
EC-R2-030829-08/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN5640A	HMN9030A	4.51	-0.90	3.270	2.05	2.460	1.54
EC-R2-030829-09/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN5641A	HMN9030A	4.54	-0.89	2.170	1.35	1.640	1.02
EC-R2-030829-10/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN5642A	HMN9030A	4.48	-0.76	2.110	1.29	1.600	0.98
EC-R2-030829-11/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN5642A & NTN5243A	HMN9030A	4.47	-0.87	2.130	1.34	1.610	1.01
EC-R2-030829-12/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	HLN6602A	HMN9030A	4.53	-0.89	9.140	5.70	6.410	3.99
EC-R2-030829-13/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9030A	4.55	-0.86	10.300	**6.35**	7.260	4.47

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of audio accessories w/ model AAH65RDC9AA1AN using the overall worst-case test configuration from above:												
KU-R2-030903-03/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	BDN6648C	4.48	-0.72	11.100	6.73	7.890	4.78
KU-R2-030903-02/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	BDN6647F	4.45	-0.99	10.700	6.95	7.560	4.91
KU-R2-030903-04/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	BDN6706B 0180358B38	4.38	-0.79	11.100	**6.99**	7.860	4.95
KU-R2-030903-06/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9013A	4.46	-1.21	10.200	6.95	7.220	4.92
KU-R2-030903-07/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9021A	4.40	-1.18	9.320	6.39	6.580	4.51

KU-R2-030903-08/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9754D	4.48	-1.14	10.300	6.88	7.280	4.86
EC-R2-030903-09/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4294C	4.43	-1.05	10.500	6.94	7.420	4.91
EC-R2-030903-10/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4425A	4.42	-1.14	9.310	6.30	6.550	4.43
EC-R2-030903-11/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4442A	4.45	-0.98	9.220	5.97	6.480	4.20
EC-R2-030903-13/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4443A HLN9133A	4.46	-1.03	10.100	6.60	7.190	4.70
EC-R2-030903-17/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4445A	4.47	-1.10	9.260	6.14	6.560	4.35
EC-R2-030903-18/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMMN4001A	4.41	-0.99	9.830	6.44	7.030	4.61
EC-R2-030903-19/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMMN4008A	4.46	-1.09	9.270	6.14	6.590	4.37
EC-R2-030903-20/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RLN5238A	4.42	-1.07	9.050	6.02	6.420	4.27
EC-R2-030903-21/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RLN5411A	4.38	-1.10	9.810	6.64	6.980	4.72
EC-R2-030903-22/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RMN4016A	4.43	-1.11	9.000	6.03	6.380	4.28
EC-R2-030903-23/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RMN4051B RKN4094A	4.45	-1.05	9.430	6.21	6.720	4.42
EC-R2-030903-24/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RMN5015A & RKN4090A	4.41	-1.06	9.990	6.65	7.140	4.75
EC-R2-030903-25/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4444A HLN9133A	4.45	-0.95	9.670	6.22	6.900	4.44

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment at band edges w/ model AAH65RDC9AA1AN using worst-case test configuration from above:												
KU-R2-030903-05/PVQYY00K	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	None	4.44	-0.96	11.000	**7.11**	7.840	5.07
KU-R2-030904-02/PVQYY00K	454	NAE6522A	NNTN4970A	Against phantom	RLN4570A	None	4.45	-1.10	5.990	3.99	4.230	2.82
KU-R2-030904-03/PVQYY00K	470	NAE6522A	NNTN4970A	Against phantom	RLN4570A	None	4.50	-0.82	3.430	2.12	2.420	1.49
KU-R2-030904-04/PVQYY00K	438	NAE6483A	NNTN4970A	Against phantom	RLN4570A	None	4.30	-0.61	7.900	4.86	5.650	3.48
KU-R2-030904-05/PVQYY00K	454	NAE6483A	NNTN4970A	Against phantom	RLN4570A	None	4.51	-0.58	5.840	3.40	4.150	2.42
KU-R2-030904-06/PVQYY00K	470	NAE6483A	NNTN4970A	Against phantom	RLN4570A	None	4.60	-0.49	4.590	2.57	3.260	1.82

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment @ 2.5cm from abdomen w/ model AAH65RDC9AA1AN and antenna model NAE6522A:												
EC-R2-030904-25/PVQYY00K	438	NAE6522A	NNTN4970A	Back/ant. 2.5cm	None	BDN6706B 0180358B38	4.51	-0.76	9.490	**5.77**	6.870	4.17
EC-R2-030904-27/PVQYY00K	438	NAE6522A	NNTN4970A	Front 2.5cm	None	BDN6706B 0180358B38	4.44	-0.56	6.630	3.91	4.910	2.89

Compliance Assessment at the Face; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of batteries w/ model AAH65RDC9AA1AN and antenna model NAE6483A:												
EC-R2-030830-02/PVQYY00K	454	NAE6483A	NNTN4497AR	Front 2.5cm	None	None	4.47	-0.51	4.150	2.40	3.020	1.75
EC-R2-030830-03/PVQYY00K	454	NAE6483A	NNTN4496AR	Front 2.5cm	None	None	4.43	-0.41	3.870	2.21	2.830	1.61
EC-R2-030830-04/PVQYY00K	454	NAE6483A	NNTN4851A	Front 2.5cm	None	None	4.45	-0.36	4.000	2.25	2.910	1.63
EC-R2-030830-05/PVQYY00K	454	NAE6483A	NNTN4852A	Front 2.5cm	None	None	4.45	-0.53	3.810	2.22	2.780	1.62
EC-R2-030830-06/PVQYY00K	454	NAE6483A	NNTN4970A	Front 2.5cm	None	None	4.51	-0.50	4.440	2.54	3.230	1.85
EC-R2-030830-07/PVQYY00K	438	NAE6483A	NNTN4970A	Front 2.5cm	None	None	4.52	-0.39	5.420	3.02	3.97	2.21
EC-R2-030830-08/PVQYY00K	470	NAE6483A	NNTN4970A	Front 2.5cm	None	None	4.42	-0.34	3.070	1.73	2.22	1.25
EC-R2-030830-09/PVQYY00K	438	NAE6483A w/ 5886627Z0 adaptor	NNTN4970A	Front 2.5cm	None	None	4.45	-0.47	4.940	**2.85**	3.610	2.08

Compliance Assessment at the Face; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of batteries w/ model AAH65RDC9AA1AN and antenna model NAE6522A:												
EC-R2-030830-10/PVQYY00K	454	NAE6522A	NNTN4497AR	Front 2.5cm	None	None	4.53	-0.79	4.830	2.94	3.500	2.13
EC-R2-030830-11/PVQYY00K	454	NAE6522A	NNTN4496AR	Front 2.5cm	None	None	4.46	-0.85	4.590	2.88	3.320	2.08
EC-R2-030830-12/PVQYY00K	454	NAE6522A	NNTN4851A	Front 2.5cm	None	None	4.41	-0.63	4.620	2.79	3.340	2.01
EC-R2-030830-13/PVQYY00K	454	NAE6522A	NNTN4852A	Front 2.5cm	None	None	4.24	-0.74	4.240	2.73	3.080	1.98
EC-R2-030830-15/PVQYY00K	454	NAE6522A	NNTN4970A	Front 2.5cm	None	None	4.41	-0.67	4.660	2.84	3.380	2.060
EC-R2-030902-11/PVQYY00K (Shortened scan)	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	None	4.43	-0.27	7.490	**4.14**	5.450	3.01
EC-R2-030902-02/PVQYY00K	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	None	4.45	-0.74	6.720	4.12	4.850	2.97
KU-R2-030902-03/PVQYY00K	470	NAE6522A	NNTN4497AR	Front 2.5cm	None	None	4.63	-0.58	2.150	1.23	1.550	0.89
KU-R2-030902-04/PVQYY00K	438	NAE6522A w/ 5886627Z01 adaptor	NNTN4497AR	Front 2.5cm	None	None	4.54	-0.69	6.590	3.91	4.790	2.84
Assessment of audio accessories w/ model AAH65RDC9AA1AN and antenna model NAE6522A:												
KU-R2-030902-05/PVQYY00K	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	HMN9752B	4.52	-0.69	6.450	3.85	4.640	2.77
KU-R2-030902-06/PVQYY00K	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	HLN9132A	4.45	-0.64	6.790	4.07	4.920	2.95
EC-R2-030902-07/PVQYY00K	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	RMN4054B	4.53	-0.57	6.410	3.71	4.660	2.70
EC-R2-030902-08/PVQYY00K	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	BDN6720A	4.44	-0.58	6.680	3.95	4.840	2.87
EC-R2-030902-	438	NAE6522A	NNTN4497AR	Front	None	RMN4055A	4.45	-0.49	7.100	**4.11**	5.170	2.99

09/PVQYY00K				2.5cm								
EC-R2-030902-10/PVQYY00K	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	HMN9727B	4.55	-0.63	6.970	4.07	5.070	2.96

Compliance Assessment at the body; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of DUT model AAH65RDH9AA1AN using the test configurations that were within 1 system measurement uncertainty from the highest calculated results at the body observed during the assessment of model AAH65RDC9AA1AN:												
EC-R2-030904-23/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	None	4.66	-0.89	8.290	5.09	5.960	3.66
EC-R2-030905-15/PVSYY020	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	None	4.59	-0.66	12.600	**7.35**	9.030	5.27
EC-R2-030904-24/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9030A	4.62	-0.87	7.390	4.51	5.250	3.21
EC-R2-030905-02/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	BDN6648C	4.56	-0.51	8.060	4.57	5.690	3.23
EC-R2-030905-03/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	BDN6647F	4.55	-0.78	7.670	4.64	5.380	3.25
EC-R2-030905-04/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	BDN6706B 0180358B38	4.55	-0.81	8.090	4.93	5.730	3.49
EC-R2-030905-05/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9013A	4.51	-0.74	7.630	4.61	5.350	3.24
EC-R2-030905-06/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9021A	4.54	-0.88	7.630	4.73	5.380	3.34
EC-R2-030905-07/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	HMN9754D	4.59	-0.91	8.070	4.99	5.700	3.52
EC-R2-030905-09/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4294C	4.52	-0.83	8.200	5.05	5.80	3.57
EC-R2-030905-10/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4425A	4.49	-0.78	7.660	4.70	5.38	3.30
EC-R2-030905-11/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMLN4443A HLN9133A	4.63	-0.83	7.810	4.73	5.50	3.33
EC-R2-030905-12/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	PMMN4001A	4.53	-0.80	7.790	4.76	5.52	3.37
EC-R2-030905-13/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RMN5015A & RKN4090A	4.57	-0.85	7.880	4.82	5.56	3.40
EC-R2-030905-14/PVSYY01Q	438	NAE6522A	NNTN4970A	Against phantom	RLN4570A	RLN5411A	4.60	-0.76	8.310	4.95	5.88	3.50

Compliance Assessment at the Face; CW mode												
Run Number/ SN	**Freq. (MHz)**	**Antenna/ Position**	**Battery**	**Test position**	**Body- worn Acc.**	**Additional attachments**	**Initial Power (W)**	**S.A.R. Drift (dB)**	**Measured 1g-S.A.R. (mW/g)**	**Max Calc. 1g-S.A.R. (mW/g)**	**Meas. 10g-S.A.R. (mW/g)**	**Max Calc. 10g-S.A.R. (mW/g)**
Assessment of DUT model AAH65RDH9AA1AN using the test configurations that were within 1 system measurement uncertainty from the highest calculated results at the face observed during the assessment of model AAH65RDC9AA1AN:												
EC-R2-030902-12/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	None	4.62	-0.85	5.610	3.41	4.090	2.49
EC-R2-030902-13/PVSYY01Q	438	NAE6522A w/ 5886627Z01 adaptor	NNTN4497AR	Front 2.5cm	None	None	4.61	-0.83	4.800	2.91	3.510	2.12
EC-R2-030907-02/PVSYY020	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	None	4.60	-0.51	6.880	**3.87**	4.990	2.81
EC-R2-030902-14/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	HMN9752B	4.62	-0.88	5.080	3.11	3.700	2.27
EC-R2-030902-15/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	HLN9132A	4.65	-0.82	4.380	2.65	3.180	1.92

EC-R2-030902-16/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	RMN4054B	4.61	-0.82	5.020	3.03	3.650	2.20
EC-R2-030902-17/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	RMN4055A	4.63	-0.83	5.690	3.44	4.160	2.52
EC-R2-030902-18/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	BDN6720A	4.66	-0.78	4.860	2.91	3.550	2.12
EC-R2-030902-19/PVSYY01Q	438	NAE6522A	NNTN4497AR	Front 2.5cm	None	HMN9727B	4.65	-0.89	4.520	2.77	3.280	2.01

7.2 Peak S.A.R. location

Refer to APPENDIX B for detailed S.A.R. scan distributions.

7.3 Highest S.A.R. results calculation methodology

The calculated maximum 1-gram and 10-gram averaged S.A.R. value is determined by scaling the measured S.A.R. to account for power leveling variations and power output slump below the reported maximum power during the S.A.R. measurements. For this device the Maximum Calculated 1-gram and 10-gram averaged peak S.A.R. is calculated using the following formula:

Max. Calc. 1-g Avg. SAR = ((S.A.R. meas. / (10^(Pdrift/10))*(Pmax/Pint))* DC%)

P_{max} = Maximum Power (W)

P_{int} = Initial Power (W)

Pdrift = DASY drift results (dB)

$SAR_{meas.}$ = Measured 1 gram averaged peak S.A.R. (mW/g)

DC % = Transmission mode duty cycle in % where applicable

Note: If intial power is > than max power then Pmax/Pint = 1

8.0 Conclusion

The highest Operational Maximum Calculated 1-gram and 10-gram average S.A.R. values found for FCC ID: ABZ99FT4056

At the body: **1-g Avg. = 7.35 mW/g; 10-g Avg. = 5.27 mW/g**

At the Face: **1-g Avg. = 4.14 mW/g; 10-g Avg. = 3.01 mW/g**

At the Head: **N/A**

The 1-g average result above at the body replaces the previously reported 1-g average results of 5.36mW/g at the body. The previously reported 1-g average result at the face 4.15mW/g will remain current.

These test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of **8.0 mW/g** per the requirements of 47 CFR 2.1093(d).